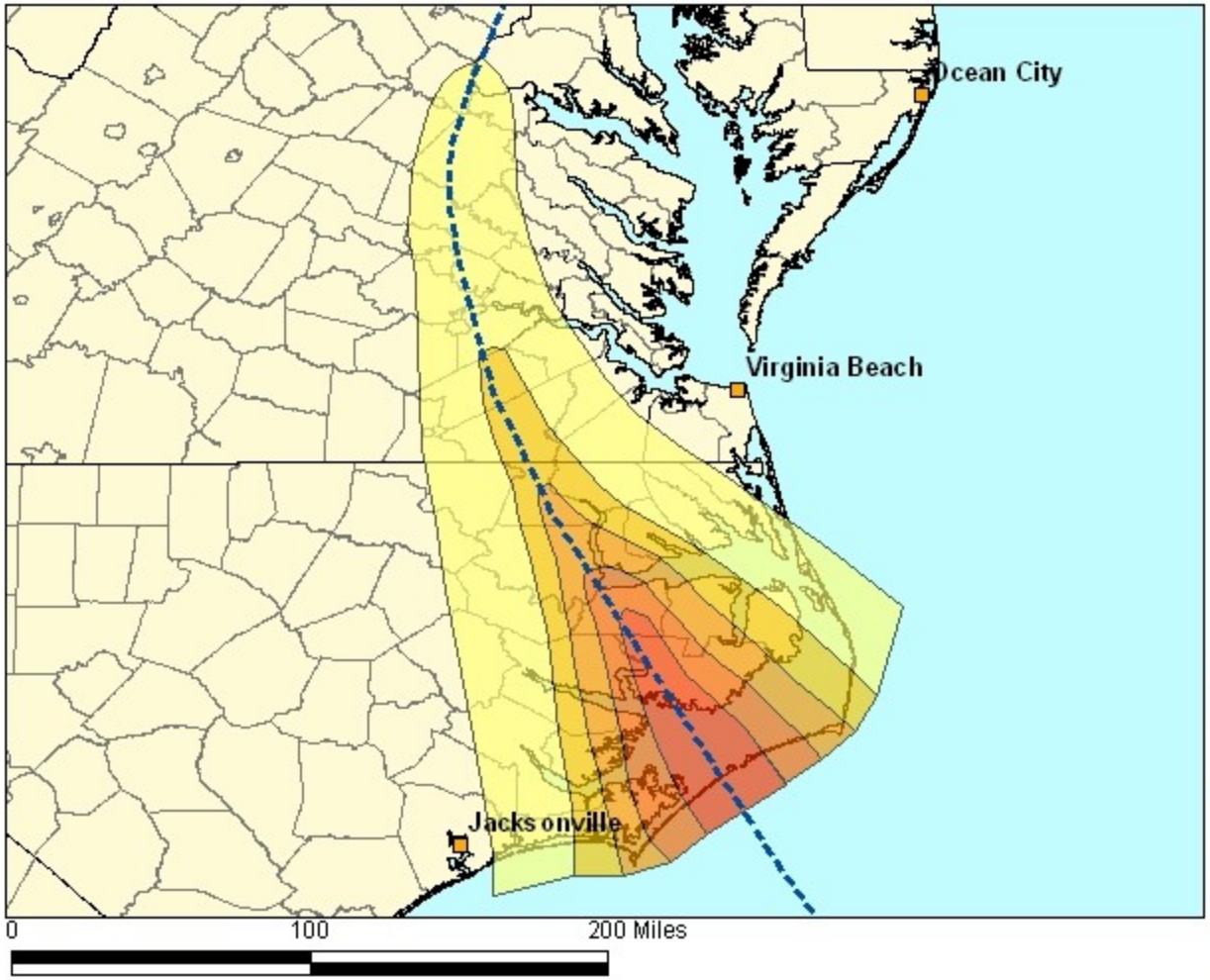
US Army Corps of Engineers

Hurricane Kate Projected Damage Areas

Landfall Expected In About **48** Hours

For Official Use Only!



Post Landfall Projected Damage Areas

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

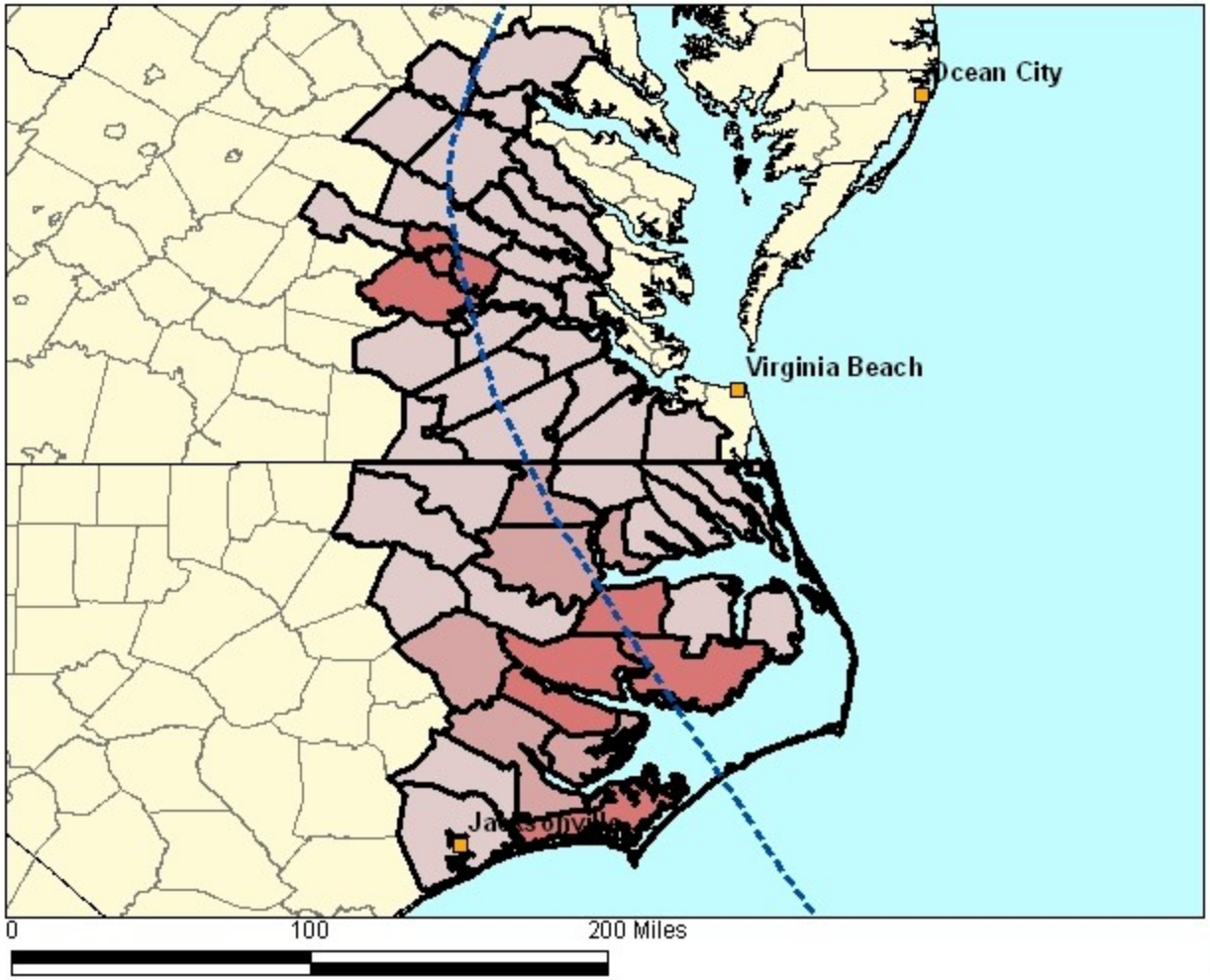
Hurricane Kate Projected Damage Areas	
Generated By: Siemsen, LRL 1330 EDT 04/30/2007	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 13

US Army Corps of Engineers

Hurricane Kate Debris Model

Landfall Expected In About **48** Hours

For Official Use Only!



Post Landfall Debris Model Results

North Carolina - 2,844,000 Yards
Virginia - 1,686,000 Yards
Maryland - 2,000 Yards

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Debris Model	
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US Army Corps of Engineers

Hurricane Kate Debris Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	Yards per State	County	Yards per County
Maryland		Charles	2,000
Maryland	2,000		
North Carolina		Beaufort	344,000
		Bertie	210,000
		Camden	14,000
		Carteret	417,000
		Chowan	128,000
		Craven	156,000
		Currituck	23,000
		Dare	64,000
		Edgecombe	2,000
		Gates	33,000
		Halifax	9,000
		Hertford	160,000
		Hyde	393,000
		Jones	10,000
		Martin	51,000
		Northampton	25,000
		Onslow	20,000
		Pamlico	143,000
		Pasquotank	49,000
		Perquimans	54,000
		Pitt	114,000
		Tyrrell	82,000
		Washington	343,000
North Carolina	2,844,000		
Virginia		Caroline	41,000
		Charles City	10,000
		Chesapeake	9,000
		Chesterfield	259,000

State	Yards per State	County	Yards per County
Virginia		Colonial Hghts Cty	28,000
(continued)		Dinwiddie	24,000
		Emporia City	8,000
		Essex	< 1,000
		Franklin City	30,000
		Fredericksburg	28,000
		Goochland	< 1,000
		Greensville	6,000
		Hanover	96,000
		Henrico	384,000
		Hopewell City	37,000
		Isle Of Wight	19,000
		James City	< 1,000
		King And Queen	< 1,000
		King George	15,000
		King William	13,000
		New Kent	14,000
		Petersburg	51,000
		Prince George	40,000
		Richmond City	307,000
		Southampton	53,000
		Spotsylvania	58,000
		Stafford	49,000
		Suffolk City	71,000
		Surry	10,000
		Sussex	26,000
Virginia	1,686,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

Hurricane Kate Debris Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Kate Population Model

Landfall Expected In About **48** Hours

For Official Use Only!

Post Landfall Population Model Results

North Carolina - 180,000
Virginia - 25,000

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 4 of 13

US Army Corps of Engineers

Hurricane Kate Population Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	Population per State	County	Population per County
North Carolina		Beaufort	18,000
		Bertie	14,000
		Carteret	41,000
		Chowan	15,000
		Craven	10,000
		Dare	5,000
		Gates	6,000
		Hertford	22,000
		Hyde	6,000
		Martin	4,000
		Northampton	< 1,000
		Pamlico	11,000
		Perquimans	9,000
		Tyrrell	5,000
		Washington	14,000
North Carolina	180,000		
Virginia		Franklin City	8,000
		Isle Of Wight	< 1,000
		Prince George	< 1,000
		Southampton	11,000
		Suffolk City	2,000
		Sussex	4,000
Virginia	25,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at **https://englink.usace.army.mil** or contact ENGLink at 1-877-936-4546

Hurricane Kate Population Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Kate Households Model

Landfall Expected In About **48** Hours

For Official Use Only!

Post Landfall Households Model Results

North Carolina - 78,000
Virginia - 8,000

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Households Model	
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US Army Corps of Engineers

Hurricane Kate Households Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	Households per State	County	Households per County
North Carolina		Beaufort	8,000
		Bertie	6,000
		Carteret	18,000
		Chowan	6,000
		Craven	4,000
		Dare	2,000
		Gates	3,000
		Hertford	9,000
		Hyde	3,000
		Martin	2,000
		Northampton	< 1,000
		Pamlico	5,000
		Perquimans	4,000
		Tyrrell	2,000
		Washington	6,000
North Carolina	78,000		
Virginia		Franklin City	4,000
		Isle Of Wight	< 1,000
		Prince George	< 1,000
		Southampton	4,000
		Suffolk City	< 1,000
		Sussex	< 1,000
Virginia	8,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Households Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Kate Commodities Model

Landfall Expected In About **48** Hours

For Official Use Only!

Post Landfall Ice/Water Model Results

Day One / Day Two / Day Three
NC - 6/12/23 Truckloads
Virginia – 2/3/6 Truckloads

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC ***(1300 EDT 04/30/2007)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input. The graphic represents single day needs with full distribution system in place and operating.
Details about this model may be obtained at **https://englink.usace.army.mil**
or contact ENGLink at 1-877-936-4546

Hurricane Kate Commodities Model	
Generated By: Siemsen, LRL 1330 EDT 04/30/2007	
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US Army Corps of Engineers

Hurricane Kate Commodities Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Beaufort	2
		Bertie	2
		Carteret	4
		Chowan	2
		Craven	1
		Dare	1
		Gates	1
		Hertford	2
		Hyde	1
		Martin	1
		Northampton	1
		Pamlico	1
		Perquimans	1
		Tyrrell	1
		Washington	2
North Carolina	23		
Virginia		Franklin City	1
		Isle Of Wight	1
		Prince George	1
		Southampton	1
		Suffolk City	1
		Sussex	1
Virginia	6		

The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system. The assumption in this scenario is that 40% of the resident population affected by the hurricane will have power outage in this area and cause a need for ice and water.

Details about this model may be obtained at **https://englink.usace.army.mil**
or contact ENGLink at 1-877-936-4546

Hurricane Kate Commodities Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Kate Temporary Housing Model

Landfall Expected In About **48** Hours

For Official Use Only!

Post Landfall Temporary Housing Model Results

North Carolina - 2,000

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast. Temporary housing is based on 1% in CAT 1, 3% in CAT 2, 6% in CAT 3 and 9% in CAT 4.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Housing Model	
Generated By: Siemsen, LRL 1330 EDT 04/30/2007	
Sources: HURREVAC LRL-DEBRIS	Page 10 of 13

US Army Corps of Engineers

Hurricane Kate Temporary Housing Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	per State	County	per County
North Carolina		Beaufort	300
		Bertie	200
		Carteret	400
		Chowan	200
		Craven	< 100
		Dare	< 100
		Gates	< 100
		Hertford	200
		Hyde	200
		Martin	< 100
		Northampton	< 100
		Pamlico	200
		Perquimans	< 100
		Tyrrell	< 100
		Washington	300
North Carolina	2,000		
Virginia		Franklin City	< 100
		Isle Of Wight	< 100
		Prince George	< 100
		Southampton	< 100
		Suffolk City	< 100
		Sussex	< 100
Virginia			

THIS IS AN EXPERIMENTAL MODEL!!

Temporary housing is based on 1% in CAT 1, 3% in CAT 2, 6% in CAT 3 and 9% in CAT 4.

Details about this model may be obtained at https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

Hurricane Kate Housing Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Kate Temporary Roofing Model

Landfall Expected In About **48** Hours

For Official Use Only!

Post Landfall Temporary Roofing Model Results

North Carolina - 3,200

Model results per county on following page

This model is based on a Category 4 storm making landfall near Ocracoke, NC.

Forecast Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 4 storm making landfall near Ocracoke, NC. These projections are based on information from the NHC (1300 EDT 04/30/2007) forecast. Temporary roofing is based on 2% in CAT 1, 6% in CAT 2, 10% in CAT 3 and 15% in CAT 4.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Kate Roofing Model	
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US Army Corps of Engineers

Hurricane Kate Temporary Roofing Model

Landfall Expected In About **48** Hours

For Official Use Only!

State	House Units per State	County	House Units per County
North Carolina		Beaufort	400
		Bertie	300
		Carteret	700
		Chowan	300
		Craven	< 100
		Dare	< 100
		Gates	< 100
		Hertford	300
		Hyde	300
		Martin	< 100
		Northampton	< 100
		Pamlico	300
		Perquimans	100
		Tyrrell	< 100
		Washington	500
North Carolina	3,200		
Virginia		Franklin City	< 100
		Isle Of Wight	< 100
		Prince George	< 100
		Southampton	< 100
		Suffolk City	< 100
		Sussex	< 100
Virginia			

THIS IS AN EXPERIMENTAL MODEL!!

Temporary roofing is based on 2% in CAT 1, 6% in CAT 2, 10% in CAT 3 and 15% in CAT 4.

Details about this model may be obtained at https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

Hurricane Kate Roofing Model

Generated By:
Siemsen, LRL 1330 EDT 04/30/2007

Sources:
HURREVAC
LRL-DEBRIS